REMARKS

Reconsideration and allowance of the subject application are respectfully requested. Upon entry of this Amendment, claims 1-14 are pending in the application. In response to the Office Action (Paper No. 6), Applicant respectfully submits that the pending claims define patentable subject matter.

I. The Present Invention

The present invention is directed to a portable printer and camera that have an image processing function for producing standardized ID photographs from a human subject with other subjects in the background, or from image data of a portrait photograph that is not adjusted to the standards for the ID photograph.

As shown in Figures 1-3, a portable instant printer 2 includes a photographic lens 3, a flash projector 4 of a flash device, light projecting and receiving windows 5 and 6 of an AF (auto focusing) device, and a photometric window 7. On a top side of the portable instant printer 2, there are a release button 8, a console 9 for entering data or commands, a data display panel 10, and a film exit 12 for ejecting an instant film 11 after exposure. A monitoring screen 13 is provided on a rear side of the portable instant printer 2. The monitoring screen 13 functions as an electronic viewfinder that displays a photographic field covered by the photographic lens 3 in a real time fashion in a photography mode. The monitoring screen 13 is also used for displaying a still image in a display mode or a printing mode.

A CCD image sensor 30 combined with a matrix of micro color filters for red, green and blue converts the optical image formed through the photographic lens 3 into electronic three

color image signals. An LCE unit displays the same color image as formed on the CCD image sensor 30 on the basis of the electronic color image signal. The image displayed on the LCD unit 14 is visible through the monitoring screen 13. When a print command is entered, the image displayed on the LCD is projected onto an exposure surface of an instant film 11 in order to record a latent image on a photosensitive layer of the instant film.

When an image frame and a type of ID photograph are selected by operating a console 9, a system controller discriminates a human subject of the image frame from its background. Image data of the image frame is processed according to the selected type of ID photograph by deleting any other subject contained in the background and changing the size and position of the human subject such that the human subject is printed on the instant film 11 in a size at a position designated for the selected type of ID photograph. In accordance with the image data processed by the system controller, the LCD unit 14 is driven to display an image containing the human subject with a blanked background.

II. Prior Art Rejections

A. Disclosure of Yang

Yang is directed to a system and method for replacing the original background of a digitally captured image with a new background. As shown in Figure 1, a photo unit 100 having for taking a picture of a subject 122, such as for identification purposes, includes a background replacement system. The subject 122 operates the photo unit 100 via a control panel 118 which is connected to a microprocessor 102. Two imaging devices 106 and 108 are provided as compatible electronic cameras capable of capturing an image in digital form, wherein one of the

imaging devices 108 is capable of capturing an IR image by using an IR pass, visible reject filter while the other imaging device 106 is capable of capturing a visible light image by using an IR reject, visible pass filter. The photo unit 100 also includes one or more background IR lights 110 with baffles 114, a front IR light 116, a visible light source 136, a display 112, a beam splitter 132, and a printer 104.

The subject 122 first selects one of a number of replacement backgrounds, then activates the photo unit 100 to begin the photo taking procedure. A preview of the visible light image appears on the display 112 and the user continues by pressing a button to take two IR and one visible light images. Each of the components of the photo unit 100 is controlled by the microprocessor 102 which collects and stores records of the first IR image, the second IR image and the visible light image. The difference between intensities at corresponding pixels of the first and second IR images is determined by the microprocessor 102 to form a mask which discriminates the foreground 122 from the background 200 regions of the images. This mask is then applied to the visible light image to create a modified visible light image by replacing the original background with the new preselected background. A print of the modified visible light image can be retrieved from a slot or tray 120 within printer 104.

B. Disclosure of Hirsoshi

Hiroshi is directed to an image photographing device for producing various-sized certification photographs, wherein the device is capable of automatically magnifying, reducing and moving the image so that a human image is the size appropriate to the size of the certification photograph. As shown in Figure 1, an area comparison part 8 performs a

comparison between the size of the certification photograph which is previously input from a photograph size input part 6 and the size of a human area extracted from a solid-state image pickup element 2 (CCD) by processing picture data stored in a memory 4 in a human area extraction part 5. The picture is enlarged and reduced until the result becomes a value less than a threshold which is set so as to set the size of a screen frame and an area where the human image is to be projected. When the human area becomes the appropriate size, an image segment part 10 segments a necessary part and transmits it to an output means 11. The image is output and the necessary number of the necessary printed photographs for certification is obtained.

C. Disclosure of Douglas

Douglas is directed to an electronic still camera with printing capability (digital instant camera), wherein an image capturing apparatus operates as the electronic camera and has an integral liquid crystal display panel for viewing acquired images prior to printing the images onto a photosensitive medium. The images are individually selectable to adjust image properties prior to transmittal of the image to a high-resolution liquid-crystal display in the image rendering apparatus. The image rendering apparatus produces an image on the photosensitive medium by projecting illumination through the image present in the high-resolution liquid-crystal display, through a copy lens, and onto the medium.

As shown in Figure 1, a photographic apparatus 10 includes a film housing 14 joined to a photographic housing 16. In a closed position, the photographic apparatus 10 serves as an electronic camera and provides for image acquisition. A user aims photographic apparatus 10 by locating a subject within a viewfinder 20 disposed within a viewfinder housing 18. When

photographing a subject, the user actuates photographic apparatus 10 by depressing a shutter button 30. The image-bearing light reflected from the subject is then acquired by an imaging lens 22 located adjacent a shutter assembly 24. A shutter (not shown) is disposed within a shutter assembly 24 and opens in response to activation of the shutter button 30. This action allows the image-bearing light to pass through the shutter assembly 24 and into an image sensor assembly 26 where it is then acquired by an image sensor (not shown) disposed within the image sensor assembly 26. The image is then stored in memory such as one or more semiconductor devices on circuit board 34, or an external memory board 48, which interfaces with a memory socket 49.

After one or more images have been acquired, they may be viewed by means of a control panel 42 located on a rear surface 40 of photographic apparatus 10. Disposed within control panel 42 is a display 44 (LCD) which presents a selected image to the user. Various imaging controls 46 are disposed on photographic housing 16 to provide the user with control over print characteristics such as contrast, sharpness, brightness, color and tint.

When the user elects to print a selected image, the photographic apparatus 10 place in an open position and the "print" button found in imaging controls 46 is depressed. A photosensitive medium 52 (instant film) is then exposed to form an image area 54, and is then ejected from film housing 14.

D. Analysis

Claims 1-3, 5, 6 and 11-14 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang et al. (U.S. Patent No. 5,923,380; hereafter "Yang") in view of Hiroshi (JP 07-303250).

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Hiroshi

and McIntyre (U.S. Patent No. 6,191,815). Claims 7-9 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Hiroshi and Douglas (U.S. Patent No. 5,946,031). Claim 10 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Yang in view of Hiroshi and Suzuki (U.S. Patent No. 5,847,836). Applicant respectfully submits the claimed invention would not have been rendered obvious in view of the combined references.

By this Amendment, Applicant has amended the claims to recite a "portable, handheld printer" and a "portable, handheld camera". Applicant respectfully submits that this amendment to the preamble of the claims limits the structure of the claimed invention and should be give patentable weight for examination purposes.

Further, independent claim 1 now recites "means for portably housing said printing means, said driving means and said image processing means" and independent claim 12 now recites "means for portably housing said electronic imaging means, said memory means and said image processing means".

Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to (1) modify Yang based on the teachings of the other cited references to produce a portable, handheld printer or camera according to the claimed invention, or (2) modify the other cited references (e.g., Douglas which discloses a digital instant camera) to include the background masking system of Yang in order to produce the claimed invention. In particular, Yang teaches that in order to replace a background of a photo image, the photo unit 100 utilizes at least one background IR light 110 with baffles 114 and a front IR light 116 in order to take a back illuminated IR image and a front illuminated IR image (see Figure 1). However, modification of the kiosk or photo booth of Yang into a portable, handheld camera and printer (or incorporation

of background IR lights of Yang in a portable camera/printer) would be a practical impossibility due to the required background illumination angle, position of the background IR lights and size considerations of the portable, handheld camera and printer.

Further, the above-described "means for portably housing ..." must be examined in accordance with 35 U.S.C. § 112, sixth paragraph, such that the prior art must perform the identical function and have the same or equivalent structure disclosed in the specification corresponding to the claimed means plus function element (see MPEP 2182). In this case, Applicant respectfully submits the kiosk or photo booth of Yang does not perform the identical function specified in the means plus function limitation (i.e., portably housing). Moreover, Applicant respectfully submits it is quite clear that the structure of the kiosk or photo booth of Yang is not the same or equivalent to that of the housing of the portable, handheld camera and printer disclosed in the specification (e.g., see Figures 1-3).

Thus, Applicant respectfully submits that one of ordinary skill in the art would not have been motivated to combine the teachings of Yang and Douglas to produce the claimed invention, and even if the references are combined, the resulting apparatus would not include the identical function and the same or equivalent structure as required by § 112, sixth paragraph.

In view of the above, Applicant respectfully submits claims 1-14 should be allowable over the cited references.

III. Conclusion

Reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be

best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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